1. A method for determining whether a test compound modulates the drug resistance of a cell, the method comprising:

a) determining the level of Chk1 expression in a cell in the presence of a test compound;

b) determining the level of Chk1 expression in the cell in the absence of the test compound; and

c) identifying the compound as a modulator of drug resistance of the cell if the level of expression of Chk1 in the cell in the presence of the test compound differs from the level of expression of Chk1 in the cell in the absence of the test compound.

2. The method of claim 1 wherein the Chk1 is encoded by an endogenous gene.

3. A method for determining whether a test compound modulates the drug resistance of a cell, the method comprising:

a) incubating Chk1 protein in the presence of a test compound;

b) determining whether the test compound binds to the Chk1 protein;

c) selecting a test compound which binds to the Chk1 protein;

d) administering the test compound selected in step c) to a non-human mammal having drug resistant cells;

e) determining whether the test compound alters the drug resistance of the cells in the non-human mammal; and

f) identifying the test compound as a modulator of drug resistance of the cell if the compound alters the drug resistance of the cells in step e).

4. A method for determining whether a test cell has a drug-resistant phenotype, the method comprising:

a) measuring the expression of Chk1 in the test cell;

b) comparing the expression of Chk1 measured in step a) to the expression of Chk1 in a control cell not having a drug-resistant phenotype; and

c) determining that the test cell has a drug resistant phenotype if the expression of Chk1 in the test cell is greater than the expression of Chk1 in the control cell.

5. A method of determining whether a test cell has a drug-resistant phenotype, the method comprising:

a) measuring the activity of Chk1 in the test cell;

b) comparing the activity of Chk1 measured in step a) to the activity of Chk1 in a control cell not having a drug-resistant phenotype; and

c) determining that the test cell has a drug resistant phenotype if the activity of Chk1 in the test cell is greater than the activity of Chk1 in the control cell.

6. A method for determining whether a subject has or is at risk of developing a drug resistant tumor, the method comprising:

a) measuring the expression of Chk1 mRNA in a biological sample obtained from the subject;

b) comparing the expression of Chk1 mRNA measured in step a) to the expression of Chk1 mRNA in a biological sample obtained from a control subject not having a drug resistant tumor; and

c) determining that the patient has or is at risk of developing a drug resistant tumor if the expression of Chk1

mRNA in the biological sample obtained from the patient is higher than the expression of Chk1 mRNA in the biological sample obtained from the control subject.

7. The method of claim 6, wherein step a) comprises the use of a nucleic acid molecule that hybridizes to Chk1 mRNA.

8. A method for determining whether a subject has or is at risk of developing a drug resistant tumor, the method comprising:

a) measuring the activity of Chk1 in a biological sample obtained from the subject;

b) comparing the activity of Chk1 measured in step a) to the expression of Chk1 mRNA in a biological sample obtained from a control subject not having a drug resistant tumor; and

c) determining that the patient has or is at risk of developing a drug resistant tumor if the activity of Chk1 in the biological sample obtained from the patient is higher than the activity of Chk1 in the biological sample obtained from the control subject.

9. The method of claim 8, wherein step a) comprises the use of an agent that binds to Chk1 protein.

10. A method for monitoring the effect of an anti-tumor treatment on a patient, the method comprising:

a) measuring the expression of Chk1 in a tumor sample obtained from the patient;

b) comparing the expression of Chk1 measured in step a) to the expression of Chk1 in a control sample of cells; and

c) determining that the anti-tumor treatment should be discontinued or modified if the expression of Chk1 in the tumor sample is higher than the expression of Chk1 in the control sample of cells.

11. The method of claim 10, wherein step a) comprises the use of a nucleic acid molecule that hybridizes to Chk1 mRNA.

12. A method for monitoring the effect of an anti-tumor treatment on a patient, the method comprising:

a) measuring the activity of Chk1 in a tumor sample obtained from the patient;

b) comparing the activity of Chk1 measured in step a) to the activity of Chk1 in a control sample of cells; and

c) determining that the anti-tumor treatment should be discontinued or modified if the activity of Chk1 in the tumor sample is higher than the activity of Chk1 in the control sample of cells.

13. The method of claim 12, wherein step a) comprises the use of an agent that binds to Chk1 protein.

14. A method for modulating the drug resistance of a cell, the method comprising modulating Chk1 expression within the cell.

15. A method reducing the drug resistance of cell, the method comprising contacting the cell with a molecule which reduces the expression of Chk1 within the cell.

16. A method of increasing the effectiveness of a chemotherapeutic compound in a patient suffering from a

disorder associated with the presence of drug-resistant neoplastic cells, the method comprising:

a) administering a chemotherapeutic compound to the patient; and

b) administering a compound with reduces Chk1 expression to the patient.

17. A method of treating a mammal suspected of having a disorder associated with the presence of drug-resistant cells, the method comprising administering to the mammal a compound that reduces the expression of Chk1 in the drug-resistant cells, the reduction be sufficient to reduce the drug resistance of the drug resistant cells.

18. A method for increasing the drug resistance of cell that has an undesirably low level of Chk1 expression, the method comprising exposing the cell to a compound that increases the expression of Chk1.

19. A method for treating a drug resistant tumor in a patient, the method comprising administering to said subject an amount of a Chk1 antagonist effective to reduce drug resistance of said tumor in the patient.

20. The use of an inhibitor of Chk1 expression, or pharmaceutically acceptable salt thereof, or a pharmaceutical composition containing either entity, for the manufacture of a medicament for the treatment of a drug resistant tumor in a patient.